

1 6. The automated system of claim 3, further comprising a holding station for
2 holding a plurality of reaction receptacles.

1 7. The automated system of claim 2, wherein said separation station comprises
2 magnetic elements for subjecting the contents of the reaction receptacle to a magnetic field
3 during at least a portion of the separation procedure.

1 8. The automated system of claim 2, wherein said separation station includes a fluid
2 aspirator mechanism constructed and arranged to aspirate fluid sample from the reaction
3 receptacle after isolating the solid support material.

1 9. The automated system of claim 7, said separation station further comprising:
2 a fluid dispense mechanism constructed and arranged to provide a wash buffer to the
3 reaction receptacle after removing the fluid sample from the reaction receptacle; and
4 a mixing device constructed and arranged to agitate the reaction receptacle to resuspend
5 the solid support material after a wash buffer is provided by said fluid dispense mechanism.

1 10. The automated system of claim 3, wherein the incubators of said amplifying
2 incubation station are maintained at a temperature or temperatures different than the temperature
3 or temperatures maintained by the incubators of said immobilizing incubation station.

1 11. The automated system of claim 2, further comprising a hybridizing incubation
2 station comprising one or more incubators, each said incubator of said hybridizing incubation
3 station defining a temperature-controlled chamber constructed and arranged to receive the
4 reaction receptacle and incubate the contents of the reaction receptacle, to which one or more
5 probe reagents have been provided, for a period of time and under conditions sufficient to permit
6 the probe to hybridize to the target sequence or an amplicon thereof.

1 12. The automated system of claim 11, wherein said amplifying and hybridizing
2 incubation stations are independent of one another or share at least one incubator in common.

1 13. The automated system of claim 11, wherein said amplifying and hybridizing
2 incubation stations are independent of one another.

1 14. The automated system of claim 11, further comprising a detection station
2 constructed and arranged to detect the presence or absence of the probe hybridized to the target
3 sequence, or an amplicon thereof, as an indication of the presence or absence of an organism or
4 one or more members of a group of organisms in the fluid sample.

1 15. The automated system of claim 14, wherein said detection station comprises a
2 luminometer constructed and arranged to detect the amount of light emitted by the contents of
3 the reaction receptacle.

1 16. The automated system of claim 2, further comprising a temperature ramping
station constructed and arranged to raise or lower the temperature of the contents of the reaction
receptacle prior to transporting the reaction receptacle to said amplifying incubation station.

1 17. The automated system of claim 2, further comprising a fluid dispensing station
constructed and arranged to dispense a fluid sample into the reaction receptacle.

1 18. The automated system of claim 2, further comprising a deactivation station
2 constructed and arranged to deactivate the nucleic acid contents of the reaction receptacle after
3 permitting the target sequence to be amplified.

1 19. The automated system of claim 14, further comprising a deactivation station
2 constructed and arranged to deactivate the nucleic acid contents of the reaction receptacle after
3 permitting the target sequence to be amplified.

1 20. The automated system of claim 3, further comprising a hybridizing incubation
station comprising one or more incubators, each said incubator of said hybridizing incubation
station defining a temperature-controlled chamber constructed and arranged to receive the
reaction receptacle and incubate the contents of the reaction receptacle, to which one or more

5 probe reagents have been provided, for a period of time and under conditions sufficient to permit
6 the probe to hybridize to the target sequence or an amplicon thereof.

1 21. The automated system of claim 20, further comprising a detection station
2 constructed and arranged to detect the presence or absence of the probe hybridized to the target
3 sequence, or an amplicon thereof, as an indication of the presence or absence of an organism or
4 one or more members of a group of organisms in the fluid sample.

1 22. The automated system of claim 21, further comprising a deactivation station
2 constructed and arranged to deactivate the nucleic acid contents of the reaction receptacle after
3 permitting the target sequence to be amplified.

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